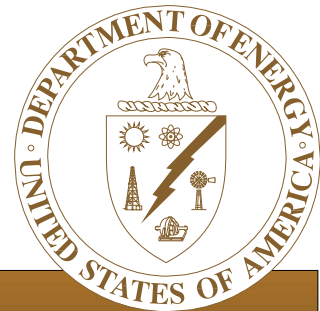


Special Review:

*Safety Management Evaluation of
Facility Disposition Programs at the*

**East Tennessee
Technology Park**

September 1997



Office of Oversight

Environment
Safety
Health
Safeguards
Security



Department of Energy

Office of Environment, Safety and Health

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Abbreviations Used in This Report

ASA	Auditable Safety Analysis
BNFL	British Nuclear Fuels, Limited
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CROET	Community Reuse Organization of East Tennessee
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
EH	DOE Office of Environment, Safety and Health
EM	DOE Office of Environmental Management
EPA	U.S. Environmental Protection Agency
ES&H	Environment, Safety, and Health
ETTP	East Tennessee Technology Park
GAO	General Accounting Office
HVAC	Heating, Ventilating, and Air Conditioning
LMES	Lockheed-Martin Energy Systems
OR	DOE Oak Ridge Operations Office
ORPS	Occurrence Reporting and Processing System
OSHA	U.S. Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act

OVERSIGHT

Executive Summary

REVIEW: Office of Oversight review of safety management of the efforts to disposition surplus facilities
SITE: East Tennessee Technology Park, Oak Ridge, Tennessee
DATES: May - June 1997

Scope

The Department of Energy (DOE) Office of Oversight reviewed safety management programs at the East Tennessee Technology Park (ETTP). Safety management at ETTP is the responsibility of the DOE Headquarters Office of Environmental Management (EM), the Oak Ridge Operations Office (OR), and the contractor who manages and operates the site, Lockheed-Martin Energy Systems (LMES). The review focused on safety management aspects associated with efforts to clean up, maintain, and reuse ETTP facilities that are no longer required for their original mission.

Background

The original uranium enrichment mission of the ETTP site, formerly known as the Oak Ridge Gaseous Diffusion Plant and later as the Oak Ridge K-25 Site, ended in 1987. Since then, ETTP has focused on managing radioactive wastes, maintaining facilities pending decisions about their disposition, characterizing hazardous materials and conditions, and preparing for decontamination and decommissioning and the eventual restoration of the site for future utilization as deemed appropriate by DOE. The recent change in the name of the site from the K-25 Site to the East Tennessee Technology Park

(ETTP) was symbolic of an evolution in the site mission, which now emphasizes “reindustrialization.” Reindustrialization involves leasing space and equipment within ETTP facilities as part of a strategic plan to reduce the cost of site cleanup through partnerships with private industry.

Leasing has been facilitated through a leasing agent, the Community Reuse Organization of East Tennessee (CROET). Over the last year, OR has increasingly shifted the site mission and management focus and efforts, and has provided resources to the reindustrialization program.

Results

Over the last four years, OR and LMES have demonstrated a limited amount of progress in their effort to decontaminate and decommission radiologically contaminated buildings slated for demolition. The most notable success was the demolition of non-contaminated facilities such as the power plant and cooling towers, which was accomplished through an innovative approach to fixed-price contracting. However, the decontamination and decommissioning program has not been successful in the maintenance or timely disposition of higher-risk buildings (i.e., buildings that were determined to present the greatest environment, safety, and health risks based on a prioritization process that considered building conditions and the quantities and types of hazardous materials they contain). In other areas of environmental remediation projects, beyond the scope of this review, it was noted that accomplishments have been made (i.e., final cleanup of the waste pond project).

EM and OR management expressed concern with the lack of progress in the decontamination and decommissioning of ETTP facilities when compared to allocated resources in the last four years. Demolition of some contaminated buildings, such as K-1131 (Feed and Tails) and K-725 (Machine Shop), has been repeatedly deferred.

These two buildings were among the five highest risk radiologically contaminated facilities scheduled for demolition as ranked by the ETTP risk ranking system. These two high-risk buildings, originally scheduled for demolition in fiscal year 1997, are again scheduled for decontamination and decommissioning in 1998, but indications are that it will probably not occur unless their disposition is accorded higher priority or additional funding is allocated.

The concern related to the lack of progress toward mitigation and demolition of the highest risk buildings, such as Buildings 725 and 1131, is exacerbated by recent decisions to place higher-risk facilities in an “abandoned-in-place” status to reduce the costs of surveillance and maintenance and control access. Contrary to DOE and site policy, these facilities are not adequately maintained, although they contain significant hazards, such as radioactive contamination, hazardous chemicals, and asbestos, that have not been completely removed or stabilized. Allowing hazardous facilities to deteriorate in an accelerated manner increases the hazards to workers and the environment, as well as the cost, difficulty, and dangers associated with eventual decontamination and decommissioning.

Over the past year, OR, in cooperation with CROET, has signed five leases under the reindustrialization program, and private sector workers are stationed in several ETTP facilities. These initial leases were implemented prior to clearly and completely defining DOE roles, responsibilities, and authorities for safety management and line oversight. Neither the Occupational Safety and Health Administration nor DOE is performing oversight of the private sector activities being performed on DOE property. A year after the first lease, OR is still continuing to address key environment, safety, and health activities needed to protect private sector workers, such as modifying the radiological protection program, identifying and implementing necessary training, and defining services to be shared by DOE and the lessee, such as fire protection and emergency planning.

The addition of reindustrialization as a major element of the ETTP mission has also created an apparent competition for management attention and resources between reindustrialization and other activities related to controlling and reducing site hazards. OR has also leased spaces within a building

that has not been fully decontaminated and that still contains potential worker hazards, including radiological contamination, asbestos, and fissile materials. OR managers indicated that funding was not available to support complete decontamination and decommissioning of this building prior to leasing.

Conclusion

The strategy to reindustrialize the site appears to have significant potential benefit to DOE and the community. However, EM and OR need to expedite their efforts to clarify DOE safety responsibilities, authorities, and liabilities with respect to private sector workers at ETTP.

The Office of the Assistant Secretary for Environment, Safety and Health (EH) acknowledges the complexities and difficulty of prioritizing limited resources to effectively disposition the multitude of shutdown facilities across ETTP, the five OR sites, and the DOE complex. EH also recognizes that higher-risk buildings at ETTP must compete for limited resources with other OR priorities, including reindustrialization and regulatory-driven environmental cleanup and restoration activities. However, it is clear that deferring decontamination and decommissioning of facilities scheduled for demolition and allowing them to deteriorate will increase the long-term risks and costs of facility disposition.

EM and OR management need to promptly revisit and coordinate priorities to assure the characterization of facility hazards and the proper upkeep and timely disposition of shutdown facilities in a manner consistent with worker safety and the long-term interests of the Department. This should include immediate identification and communication of DOE roles, responsibilities, authorities, and accountability for the safety of private sector workers and the advisability of and liabilities associated with the leasing of spaces within facilities not completely decontaminated and deactivated. In summary, there needs to be an improved balance achieved in safety management at ETTP regarding the upkeep and disposition of high-risk radiologically contaminated buildings, environmental restoration, and the implementation of the reindustrialization program, including the application of funding, resources, and management focus and priority.